

• COLORADO RIVER •
AQUEDUCT NEWS

THE METROPOLITAN WATER DISTRICT

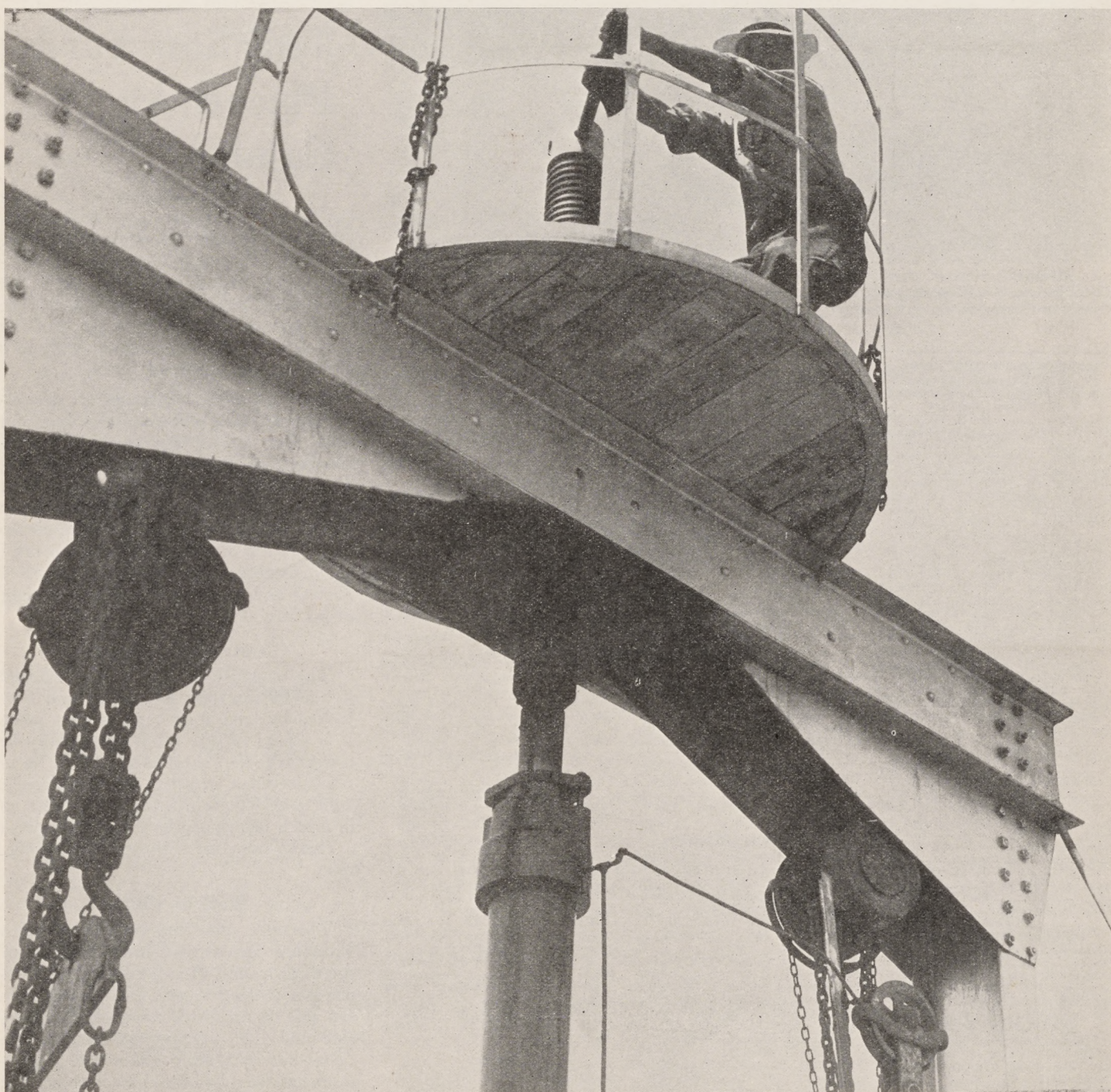


OF SOUTHERN CALIFORNIA

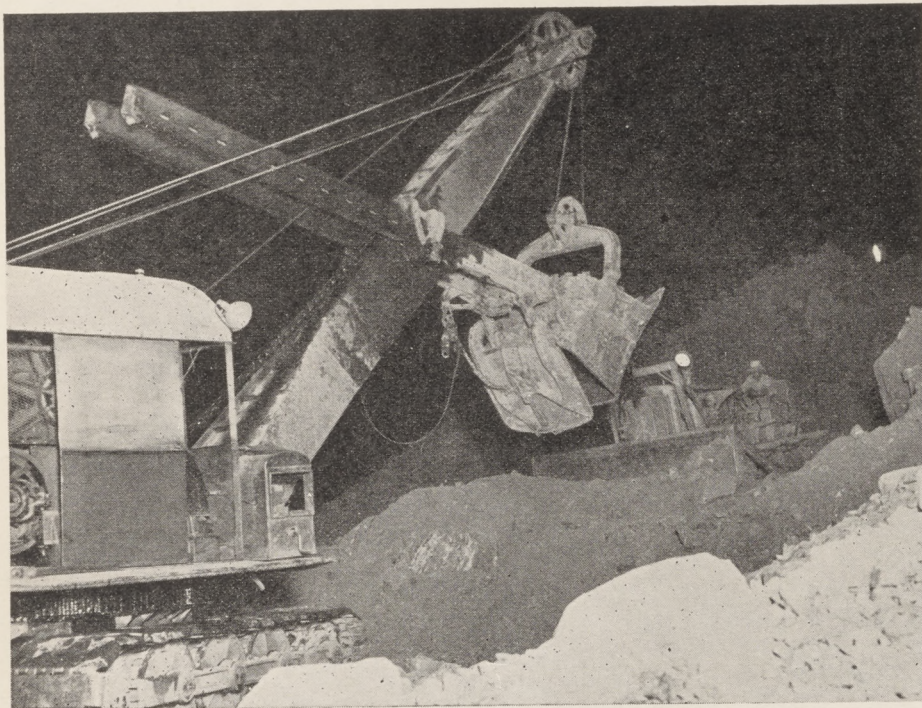
Vol. III.

AUGUST 23, 1936

No. 16



The hard work indicated may be just an "act" since the real pressure is applied by the hydraulic ram in the center. It is the top section of a machine to test compressive strength of the type of precast concrete pipe being used on Distribution lines.



Midnight view of shovel and "dozer" excavating for a new haul road at Cajalco dam, where 3-millionth yard of dirt has just been placed.

Directory

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Divisions 2 & 3.....John Stearns
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Divisions 5 & 6.....J. B. Bond
Distribution.....R. B. Diemer
Transmission.....Robert N. Allen

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(Main Aqueduct Tunnels)

Colorado River, Copper Basin and Whipple Mt. Tunnels, Walsh Construction Co., W. A. Huntington and L. M. Ramey, Tunnel Supts.
Coxcomb East and Iron Mt. tunnels, Winston Bros., E. A.

Bernard, Gen. Supt.; F. T. Hillman and R. V. Johnson, Tunnel Supts.

Iron Mt. Tunnel, West Portal, Utah Construction Co., Ben Arp, Gen. Supt.

East Eagle Mt. Tunnel and West Eagle Mt. Tunnel, east portion, Broderick & Gordon, John Will, Gen. Supt.

Coachella Tunnel, Dist. Force Acct., R. C. Booth, Gen. Supt.
Berdoos Camp, East Coachella Tunnel, Concrete, John Austin, Supt.

Fan Hill, Thousand Palms Tunnel, Concrete, V. T. Davis, Supt.

Thousand Palms Siphon, M. Hjalmarson, Supt.

Long Canyon and Wide Canyon Tunnels, Concrete, Kenneth MacIssac, Supt.

Little Morongo, Excavation, R. Ferry, Supt.

San Jacinto Tunnel, District Force Acct., B. C. Leadbetter, Gen. Supt.; A. L. Simpson, Neil O'Donnell and C. E. Sides, Tunnel Supts.; Chas. F. Thomas, Jr., Gen. Foreman.

Valverde Tunnel, Dravo Contr. Co., R. W. Remp, Gen. Supt.; H. C. Richardson, Asst. Gen. Supt.; Fred Youmans, Tunnel Supt.

(Distribution Tunnels)

Monrovia tunnels Nos. 1, 2 and 3, West Construction Co., H. E. Carleton, Gen. Supt.; O. V. Humason, Peter Brisbols and Angus MacDonnell, Tunnel Supts.

Sierra Madre tunnel, J. F. Shea Co., Inc., Edmund H. Shea, Supt.

Pasadena tunnel, San Rafael tunnels Nos. 1 and 2, and Monrovia tunnel No. 4, L. E. Dixon Co., Bent Bros., Inc., and Johnson, Inc., S. D. Hackley, P. C. Guinn and W. N. Evans, Supts.

(Canal, Siphon, Conduit)

Schedules Nos. 1, 1A, 1B, 10, 10A, 10B, 11, 11A, 11B, 11C, 13, 13A, and 13B, Aqueduct Construction Co., S. T. Corfield, Gen. Supt.; Charles Harlowe, Jr., Excav. Supt.

Schedules Nos. 2, 2A, 2B, 3,

3A, 3B, 7 and 7A, Barrett & Hilt and Macco Corp.; H. W. McKinley, Supt.

Schedules Nos. 4, 4A, 5 and 5A, Jahn & Bressi Construction Co., Joseph Muscolo, Gen. Supt.; Dominick Bressi, Asst. Gen. Supt.

Schedules Nos. 6, 8, 8A and 8B, Clyde W. Wood and M. J. Bevanda, A. F. Weesner, Gen. Supt.; L. L. Green, Excav. Supt.; A. V. Fisher and V. S. Price, Concrete Supts.

Schedules Nos. 9, 9A, 9B and 9C, The Utah Construction Co., Ben Arp, Gen. Supt.; E. C. Caldwell, Excav. Supt.

Schedules Nos. 12 and 12A, Three Companies, Inc., C. J. Kavanagh, Supt.

Schedules Nos. 14, 15 and 16, Thompson-Starrett Co., Inc., Rodney Smith, Resident Engineer; William Hayes, Excav. Supt.

Schedule 17, Dist Force Acct., H. Hjalmarson, Supt., (Fan Hill).

Schedule 18J, Morrison-Knudsen, J. O. Young, Gen. Supt.

Schedules Nos. 18, 19 and 20, J. F. Shea Co., Inc., H. F. Rennebohm, Supt.

Schedules Nos. 20A, 20B, 20C, 21, 22 and 23, The Griffith Co., Harry Davis, Supt.

(Distribution Pipe Line)

Schedules No. 4P & 5P, American Concrete & Steel Pipe Co., Wm. A. Whiting, Gen. Supt.; D. H. Rankin, Plant Supt.; J. C. Connell, Const. Supt.

Schedules 6P & 7P, J. F. Shea Co., Inc., Gilbert Shea, Gen. Supt.; Don Lind, Plant Supt.

Schedule 8P, United Concrete Pipe Corp., John Huber, Plant Supt.; Charles Johnston, Const. Supt.

Schedules 2B & 2S, Western Pipe & Steel Co., L. L. White, Supt.

(Dams)

Cajalco dam, The Griffith Co., Harry Davis, Gen. Supt.
Parker dam, Six Cos., Inc., Frank Crowe, Gen. Supt.; E. A. Moritz, Eng. in charge.

COLORADO RIVER AQUEDUCT NEWS

THE METROPOLITAN WATER DISTRICT



OF SOUTHERN CALIFORNIA

LOS ANGELES, CALIFORNIA

Published twice monthly in the interest of Field and Office Workers on the Colorado River Aqueduct, and for the information of all other citizens of the Metropolitan Water District.

Vol. III August 23, 1936 No. 16

3-Million Yards Placed At Cajalco

The 3-millionth cubic yard of earth has been placed and compacted at Cajalco, the terminal reservoir of the main aqueduct. Averaging in excess of 100,000 yards placed per week since the work was started last September, the construction near Riverside is one of the largest and fastest moving earthfill jobs in the entire Southwest.

With a total of seven and a half million yards to be placed on the dam and dike, this part of the work is rapidly nearing the halfway mark. Working twenty-four hours a day, the process of transporting "conditioned" material from borrow pits in the reservoir basin to the two fills has forged steadily ahead until the dike now has a maximum height of 75 feet and the dam a maximum height of 60 feet.

Controlled Densities

The moisture content of the material in the borrow pits is checked and controlled by laboratory tests so that when it is placed on the fill it can readily be compacted by "sheepfoot" rollers to a predetermined density. As a result, the dam, and dike, which are being built up in 6-inch layers, are hard and tight with a density high for this type of construction.

Wall of China

The once calm and peaceful Cajalco basin has been turned into a beehive of speeding trucks, thundering power shovels, and roaring "cats". Along the northern side of the bowl, overlooking Riverside and the surrounding country, the dike—nearly a mile and a half long—stretches from hill to hill and heads for the horizon like the Great Wall of China.

More Areas Want Water

During the past few months, records in the office of Chairman Whitsett of the District's Board of Directors indicate, requests for information as to the possibility of securing Aqueduct water have been received from communities all the way from Ventura County to San Diego.

These areas represent property values totaling more than two billion dollars and cover areas totaling 400,000 acres. With headlines in daily papers describing the ravaging effect of drought in other parts of the United States, attention is rapidly being focused on the Metropolitan Water District to protect Southern California against diminishing local water supplies.

"Our people in the District know that we cannot gamble with drought," said Mr. Whitsett in commenting on the applications for aqueduct information.

Included in the groups that have filed inquiries are:

Foothill areas in the vicinity of the cities of Glendora, Pomona, Ontario, Upland, Claremont, San Dimas and La Verne, representing 80,000 acres; Orange County Water District of 200,000 acres, and South Coast Water District, including city of Laguna; Territory south of Santa Ana—El Toro, San Juan Capistrano—and to and including the city of San Diego; Hermosa Beach and vicinity.

V. F. W. Post For M. W. D.

Launching of an Aqueduct Post of the Veterans of Foreign Wars has been announced by J. McNeally, employed at Cabazon. Among the thousands of veterans working on the aqueduct are many who saw service on the "other side" during the World War, or who have taken part in other foreign wars. The formation of an Aqueduct Post of the V. F. W. will make it possible for many on the main aqueduct to affiliate with the organization, since it will be the only post east of Redlands.

Those interested are requested to communicate with J. McNeally, 1448 E. Ramsey St., Banning, Calif.



Courtesy Parker Dam Office U. S. B. R.
Not a Figueroa Street vehicle tunnel, but one of the recently completed Parker Dam Diversion tunnels. The Colorado River will flow through this in less than a month, when work on the Aqueduct diversion dam is started.

PARKER TUNNELS FINISHED

The last yard of concrete has now been placed in the lining of the diversion tunnels at Parker Dam, and the big bores are ready to change the course of the Colorado River while the dam is being constructed. Superintendent Frank Crowe, who also built the Boulder Dam, announced that with the completion of this phase, the work will be suspended until September 15, at which time the river diversion will be started.

Crowe stated that during the shut-down he and his "gang" are all going fishing. He and his staff stuck by their story in spite of the volume of Bronx cheers which immediately arose on all sides from other construction men in the vicinity of Division 1. There is a possibility, however, that they need a rest since they lined the 29-foot diameter holes in less than two and a half months.

The completion of the two 1730-foot tunnels marks the first major step in the erection of the Parker Dam. Being built under the direction of the Federal Government, it is considered an integral part of the Metropolitan Water District, because when completed it will divert water from the Colorado River into the Aqueduct, and will form a reservoir extending about 50 miles upstream just short of the city of Needles.

When Boulder Dam was built, it was deemed necessary to construct four 50-foot diversion tunnels, but with the regulation provided by the big dam, two 29-foot tunnels—both of which are on the Arizona side, will be sufficient to handle the river's flow during the construction of Parker Dam.

Frank Crowe is general superintendent for the J. F. Shea Company, who have sub contracted the work from the Six Company at Parker Dam. He acted in the same capacity for the Six Companies during the construction of the Boulder Dam.

FAIR PLANS UNDER WAY

Plans are rapidly being completed for the Metropolitan Water District days, September 26 and 27, at the Los Angeles County Fair in Pomona. Inasmuch as the dates set aside to honor the big job will be shut-down periods at most of the aqueduct camps, a large number of District people are expecting to visit the fair and find out just why Los Angeles County is the biggest agricultural county in the United States. The "Mile of Midway" is offered to interest those who don't care about the "earthy" side of the matter. Parking space inside the grounds will care for 30,000 automobiles.

CONSTRUCTION

TUNNELS

TUNNEL EXCAVATION (MILES)
Completed Remaining

*TUNNEL LINING (MILES)
Completed Remaining

Aqueduct 86.03 6.04
Distribution 13.43 2.77
Total 99.46 8.81

July 15 to August 15, 1936

Aqueduct 53.30 38.77
Distribution 2.50 13.66
Total 55.80 52.43

*Arch considered to equal 0.9 completed section.

TUNNEL PROGRESS

CONTRACTOR	TUNNEL	LENGTH IN FEET	EXCAVATION IN FEET					LINING IN FEET					
			NUMBER OF SHIFTS	AVERAGE PER SHIFT	THIS PERIOD	TOTAL TO DATE	REMAIN- ING	ARCH OR INVERT	NUMBER OF SHIFTS	AVERAGE PER SHIFT	THIS PERIOD	TOTAL TO DATE	REMAIN- ING
WALSH CONSTRUCTION CO.	COLORADO RIVER	5,482		Completed		5,482	0	Arch			0	5,475	7
	COPPER BASIN NO. 1	705		Completed		705	0	Invert			0	5,475	7
	COPPER BASIN NO. 2	11,568		Completed		11,568	0	Arch			0	696	9
	WHIPPLE MOUNTAIN	(32,238)		Completed		(32,238)	(0)	Invert			0	696	9
	East from Adit	18,336		Completed		18,336	0	Arch			0	11,568	0
	West from Adit	13,902		Completed		13,902	0	Invert			0	11,568	0
WINSTON BROTHERS	IRON MT. (E. PORTION)	(23,645)		Completed		(23,645)	(0)	Arch	21	71.5	1501	1,501	(32,238)
	East from Shaft	9,902		Completed		9,902	0	Arch	3	15.7	47	13,898	4
	West from Shaft	13,743		Completed		13,743	0	Invert			0	9,887	15
UTAH CONSTRUCTION CO.	IRON MT. (W. PORTION)	16,208		Completed		16,208	0	Arch			0	172	13,571
	COXCOMB (From E. Portal)	17,795		Completed		17,795	0	Invert	18	46.0	828	13,728	15
BRODERICK & GORDON	E. EAGLE (From W. Portal)	9,440		Completed		9,440	0	Arch			0	0	9,440
	W. EAGLE (E. PORTION)	(15,845)		Completed		(15,845)	(0)	Invert			0	0	(15,845)
	East from Adit	7,871		Completed		7,871	0	Arch			0	0	7,871
DRAVO CONTRACTING CO.	VALVERDE	(38,015)		Completed		(38,015)	0	Arch	28	32.4	906	906	7,068
	East Portal to Shaft 3	21,415		Completed		21,415	0	Invert	0	0	0	38,014	1
	West from Shaft 3	12,067		Completed		12,067	0	Arch	10	358.6	3,586	37,781	234
	East from Adit	4,533		Completed		4,533	0	Invert			0	0	0
TOTALS		Ft. 170,941 Miles (32.38)				170,941 (32.38)	0 (0)	Arch	70	46.8	3,282	111,881	59,060
								Invert	10	358.6	3,586	55,692	115,249

AQUEDUCT — FORCE ACCOUNT

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA	EAST COACHELLA	(96,605)		Completed		(96,605)	0	Arch					
	East Portion	42,910		Completed		42,910	0	Invert	11	31.8	350	28,862	14,048
	West Portion	53,695		Completed		53,695	0	Arch	0	0	0	28,129	14,781
	1000 PALMS NO. 1 (From W.P.)	16,058		Completed		16,058	0	Arch	67	55.9	3,747	35,525	13,170
	1000 PALMS NO. 2	8,838		Completed		8,838	0	Invert			0	0	53,695
	WIDE CANYON NO. 1	14,305		Completed		14,305	0	Arch	34	41.6	1,416	2,672	13,386
	WIDE CANYON NO. 2	848		Completed		848	0	Arch			0	3,838	0
	SEVEN PALMS (From E. Prtl)	4,810		Completed		4,810	0	Arch			0	14,305	0
	SEVEN PALMS (From W. Prtl)	11,920		Completed		11,920	0	Arch			0	848	0
	LONG CANYON	15,305		Completed		15,305	0	Arch	74	90.3	6,680	16,730	0
	BLIND CANYON	6,836		Completed		6,836	0	Invert			0	12,030	3,275
	MORONGO NO. 1	5,725		Completed		5,725	0	Arch			0	0	6,836
	MORONGO NO. 2	1,902		Completed		1,902	0	Arch			0	0	5,725
	SAN JACINTO	(68,639)		Completed		(68,639)	0	Invert			0	0	1,902
	Cabazon Shaft to East Portal	8,653	93	6.8	630	8,541	(31,881)	Arch					(68,639)
	Cabazon to Lawrence	26,817	93	0.5	46	9,082	17,735	Invert	2	184.5	369	2,294	66,345
	Cabazon Pioneer	18,119	93	1.0	96	416	17,703	Arch	186	65.5	12,193	114,810	131,581
	Lawrence Adit	5,651	93	2.4	220	1,088	4,563	Invert	2	184.5	369	34,261	212,530
	Potrero Pioneer	15,163	93	8.4	782	1,167	13,996	Arch					
	Potrero to Lawrence	17,670	93	6.7	619	3,636	14,034	Invert					
	Potrero Shaft to West Portal	15,499		Completed		15,499	0	Arch					
TOTALS		Ft. 246,791 Miles 46.74	279	4.7	1,295 (0.25)	214,910 (40.70)	31,881 (6.04)	Arch	186	65.5	12,193	114,810	131,581
								Invert	2	184.5	369	34,261	212,530

DISTRIBUTION — CONTRACT

GRIFFITH CO.	CAJALCO OUTLET	2,439	53	9.2	486	1,404	1,035					0	2,439
WEST CONSTRUCTION CO.	MONROVIA NO. 1 (From W.P.)	7,868		Completed		7,868	0		88	12.0	1,060	1,460	6,335
	MONROVIA NO. 2 (From Jct.1)	940		Completed		940	0					0	855
	MONROVIA NO. 3	(32,105)		Completed		(25,242)	(6,863)					0	(32,069)
	East from Adit	11,340	89	8.9	793	9,529	1,811						
	West from Adit From West Portal }		89	6.0	530	4,182							
		20,765	89	7.1	628	11,531	5,052						
DIXON, BENT BROS. & JOHNSON	MONROVIA NO. 4 (From W.P.)	8,096	75	6.6	495	3,578	4,518					0	8,084
J. F. SHEA CO., Inc.	SIERRA MADRE (From E. Prtl)	6,700		Completed		6,700	0		81	19.7	1,596	5,987	713
DIXON, BENT BROS. & JOHNSON	PASADENA EAST	5,546		Completed		5,546	0		70	23.8	1,663	5,546	0
	PASADENA (From West Portal)	12,140		Completed		12,140	0		10	21.9	219	219	11,921
	SAN RAFAEL No. 1 (From W.P.)	4,040		Completed		4,040	0					0	4,040
	SAN RAFAEL No. 2 (From E.P.)	5,669	81	5.4	440	3,461	2,208					0	5,669
	TOTALS Ft. Miles	85,543 (16.23)	476	7.1	3,372 (0.64)	70,919 (13.43)	14,624 (2.77)	Full Section	249	18.2	4,538 (0.86)	13,212 (2.50)	72,125 (13.66)

ION PROGRESS

	CANAL, CONDUIT AND SIPHON (MILES)	
	Completed	Remaining
Excavation	115.07	30.65
Concrete	105.16	39.51
Back Fill	49.55	32.91

CANAL, CONDUIT, SIPHON & PIPE LINES

August 1 to August 15, 1936

	DISTRIBUTION PIPE LINE (MILES)	
	Completed	Remaining
Excavation	8.71	32.87
Concrete	6.88	34.70
Back Fill	5.94	35.64

AQUEDUCT

SCHED. NO.	CONTRACTOR	FEATURES	Length In Feet	EXCAVATION—Feet			CONCRETE—Feet			BACKFILL—Feet		
				Period	To Date	Remain'g	Period	To Date	Remain'g	Period	To Date	Remain'g
1	AQUEDUCT CONSTR. CO.	Conduit and Siphons	22,025	0	22,025	0	0	22,025	0	4,125	22,025	0
2	BARRETT & HILP	Conduit and Siphons	30,569	0	29,314	1,255	0	24,584	5,985	0	22,400	8,169
3	AND MACCO CORP.	Canal and Siphons	40,499	0	37,895	2,604	0	32,005	8,494	0	1,390	10,955
4	JAHN & BRESSI	Canal and Siphons	53,218	0	53,218	0	0	53,218	0	0	1,992	1,083
5	CONSTR. CO.	Canal and Siphons	53,588	0	53,588	0	0	53,588	0	0	2,700	1,320
6	WOOD AND BEVANDA	Siphon	15,521	0	15,521	0	0	15,521	0	0	13,043	2,478
7	BARRETT & HILP & MACCO CORP.	Canal and Conduit	27,707	0	27,707	0	0	27,707	0	0	12,170	0
8	WOOD AND BEVANDA	Canal and Siphons	49,579	0	49,579	0	0	49,174	405	0	7,090	800
9	UTAH CONSTRUCTION CO.	Canal, Conduit and Siphons	47,360	0	45,788	1,572	0	44,074	3,286	1,182	1,975	4,221
10	AQUEDUCT CONSTR. CO.	Canal and Siphons	44,505	0	44,505	0	0	44,505	0	0	3,594	1,256
11	AQUEDUCT CONSTR. CO.	Canal, Conduit and Siphons	44,002	2,307	8,130	35,872	0	0	44,002	0	0	10,322
12	THREE COMPANIES, INC.	Conduit and Siphons	32,977	0	28,789	4,188	0	24,652	8,325	0	23,030	9,947
13	AQUEDUCT CONSTR. CO.	Canal, Conduit and Siphons	31,965	1,200	24,696	7,269	0	11,782	20,183	0	0	3,665
14	THOMPSON-STARRETT CO.	Conduit and Siphons	32,366	0	32,366	0	0	32,366	0	0	32,366	0
15	THOMPSON-STARRETT CO.	Conduit and Siphons	35,849	0	423	35,426	0	403	35,446	0	0	35,849
16	THOMPSON-STARRETT CO.	Conduit and Siphons	19,359	0	0	19,359	0	0	19,359	0	0	19,359
17	M. W. D.—FORCE ACCT.	Conduit and Siphons	21,961	964	16,263	5,698	0	12,573	9,388	0	10,843	11,118
18	J. F. SHEA CO., INC.	Conduit and Siphons	27,537	1,015	16,950	10,587	0	13,660	13,877	0	13,660	13,877
18J	MORRISON-KNUDSEN CO.	Siphons	9,809	0	9,809	0	0	9,809	0	0	9,809	0
19	J. F. SHEA CO., INC.	Conduit and Siphons	37,364	0	0	37,364	0	0	37,364	0	0	37,364
20	J. F. SHEA CO., INC.	Siphons	18,618	0	18,618	0	0	18,618	0	0	18,618	0
20 A & B	M. W. D.—FORCE ACCT.	Siphons	735	0	705	30	0	0	735	0	0	735
21	GRIFFITH COMPANY	Siphons	14,613	0	14,613	0	0	14,613	0	0	14,613	0
22	GRIFFITH COMPANY	Siphons	7,229	0	7,229	0	0	7,229	0	0	7,229	0
23	(Outlet Channel Unlined)	Conduit and Outlet Channel	38,695	95	38,635	60	0	33,145	0	15	33,145	0
3	WINSTON BROS. CO. & WILLIAM C. CROWELL	Siphon (Gene Inlet)	1,877	0	1,676	201	0	589	1,288	0	530	1,268
4	WINSTON BROS. CO. & WILLIAM C. CROWELL	Siphon (Copper Basin)	450	0	116	334	0	0	450	0	0	0
TOTALS			759,977	5,581	598,153	161,819	0	545,840	208,587	5,322	252,222	173,786

DISTRIBUTION PIPE LINES

1	AMER. CONC. & STL. PIPE CO.	Precast Concrete Pipe	12,227	0	0	12,227	0	0	12,227	0	0	12,227
2	WESTERN PIPE & STL. CO.	Welded Steel Pipe	54,530	1,389	13,439	41,091	2,782	4,333	50,197	1,336	2,818	51,712
3	AMER. CONC. & STL. PIPE CO.	Precast Concrete Pipe	20,124	0	0	20,124	0	0	20,124	0	0	20,124
4	AMER. CONC. & STL. PIPE CO.	Precast Concrete Pipe	25,867	2,307	21,172	4,695	2,307	21,136	4,731	2,034	20,334	5,533
5	AMER. CONC. & STL. PIPE CO.	Precast Concrete Pipe	24,895	0	0	24,895	0	0	24,895	0	0	24,895
6	J. F. SHEA CO., INC.	Precast Concrete Pipe	27,348	1,360	2,484	24,864	1,562	2,319	25,029	820	820	26,528
7	J. F. SHEA CO., INC.	Precast Concrete Pipe	30,044	0	0	30,044	0	0	30,044	0	0	30,044
8	UNITED CONC. PIPE CORP.	Precast Concrete Pipe	24,525	2,250	8,917	15,608	2,151	8,532	15,993	2,229	7,401	17,124
TOTALS			219,560	7,299	46,012	173,548	8,802	36,320	183,240	6,419	31,373	188,187

MISCELLANEOUS CONSTRUCTION

August 1 to August 15, 1936

AQUEDUCT PUMPING PLANTS AND APPURTENANT WORKS

CONTRACTOR	FEATURES	EXCAVATION—Cu. Yds.				CONCRETE—Cu. Yds.				STEEL—Tons			
		Est. Quan.	Period	To Date	%	Est. Quan.	Period	To Date	%	Est. Quan.	Period	To Date	%
WINSTON BROS. CO. & WILLIAM C. CROWELL	Intake Plant	102,400	2,400	86,346	84.3								
	Gene Plant	92,600	49	79,472	85.8	13,370	0	1,044	7.8	2,052	0	7.0	0.3
WOOD AND BEVANDA	Iron Mt. Plant	358,700	0	224,245	62.5	19,897	0	55	0.3				
L. E. DIXON CO.	Eagle Plant	227,695	17,745	100,839	44.3	21,122	0	650	18.9	2,160	0	37.4	1.7
NOT AWARDED	Hayfield Plant												
TOTALS			20,194	490,902			0	1,749			0	44.4	

BOULDER TRANSMISSION LINE—FRITZ ZIEBARTH

FEATURES	Length-Line MI.	Period	To Date	Percent
Footings Constructed	237.0	0	164.0	69.3
Towers Erected	237.0	54.7	60.7	25.6
Wire Strung	237.0	24.0	30.0	12.6

TELEPHONE LINES—NEWBERY ELECTRIC CO.

FEATURES	Length-Line MI.	Period	To Date	Percent
Converting Spur to Truck Line	7.8	0	7.8	100
Constructing New Trunk Line	139.5	0	139.5	100

PARKER RESERVOIR—SIX COMPANIES, INC.

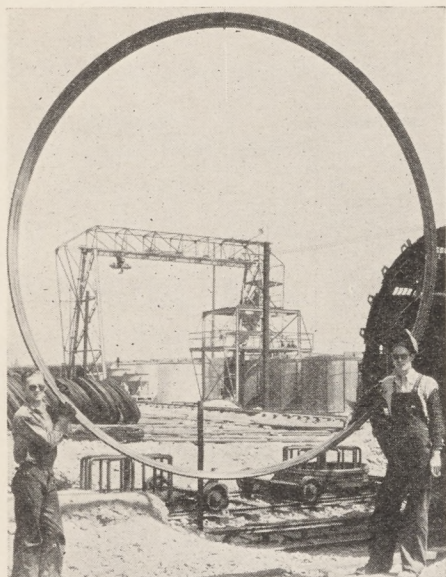
FEATURES	Est. Quan.	Period	To Date	Percent
Diversion Tunnels—Excav.	3,463 Ft.	0	3,463	100
Diversion Tunnels—Concrete	3,363	403	3,363	100
Dam Excavation	1,391,000 C.Y.	48,598	275,903	19.8
Dam Concrete	277,900 C.Y.	0	0	0

CAJALGO RESERVOIR—GRIFFITH COMPANY

FEATURES	Est. Quan.	Period	To Date	Percent
Diversion Tunnel	2,000 Ft.	0	2,000	100
Dam & Dike Excavation	651,000 C.Y.	26,095	297,470	45.7
Dike Fill	4,113,000 C.Y.	51,900	3,022,180	73.7
Dam Fill	3,410,000 C.Y.	110,300	389,900	11.4

COMPLETED FEATURES

TUNNELS					CANAL, CONDUIT AND SIPHON				
CONTRACTOR	TUNNEL	Length in Miles	Work Started	Work Completed	CONTRACTOR	FEATURE AND NAME OR SCHEDULE	Length in Miles	Work Started	Work Completed
MORRISON-KNUDSEN CO.	Mecca Pass, No. 1, 2 & 3	1.13	7-17-33	2-10-35	UNITED CONC. PIPE CO.	LITTLE MORONGO SIPHON	0.13	2-27-34	8-20-34
WEST CONSTRUCTION CO.	Whitewater Nos 1 & 2	1.94	7-18-33	4-15-35	M.W.D.—FORCE ACCT.	FAN HILL COND. & SIPHON	0.32	10-21-33	11-19-34
SHOFNER & GORDON	Hayfield No. 2	1.03	7-8-33	7-27-35	GRIFFITH COMPANY	SCHEDULE NO. 20-C	1.33	5-3-35	9-14-35
HAMILTON & GLEASON	Bernasconi	1.18	4-19-33	11-21-35					
J. F. SHEA CO., INC.	Cottonwood	3.81	6-14-33	12-29-35					
HUNKIN-CONKEY CON. CO.	Hayfield No. 1	1.84	10-21-33	1-9-36					
DIXON & BENT BROS.	W. Eagle-W. Por.	2.02	9-8-33	3-12-36					
TOTALS		12.95			TOTALS		1.78		



If you'll look carefully you will see that this big steel ring is being held up by a cable at the top, and not by the two welders. Through it is seen one of the gantry cranes at the J. F. Shea plant, located in Claremont to manufacture precast concrete pipe for the Distribution Upper Feeder.

Big Job Nears Halfway Mark

Daily and weekly progress reports forwarded to General Manager Weymouth's office now indicate that the Colorado River Aqueduct is nearly half completed. The exact figures show that the big job, in all of its phases, was 46 per cent finished when this copy of the NEWS went to press.

Progress records give the status of the various features as follows:

Of the 108 miles of tunnels, 99 miles have been excavated and 54 miles concrete lined and completed.

Of the 63 miles of canal, 53 miles have been completed.

Of the 55 miles of covered conduit, 30 miles have been constructed.

Twenty miles, of the 28 miles of siphons, finished.

The Parker Dam diversion tunnels are completed. (See Page 3).

The Cajalco Reservoir dam and dike are 41 per cent built. (See Page 2).

Work is in progress on 41 miles of the 130-mile distributing system, and the transmission lines are 46 per cent completed.

Along with these figures comes word as to what all this has meant to the men doing the work. Direct payrolls to aqueduct workers since December, 1932, have totaled more than \$32,000,000.

MONTHLY REPORT REVIEWS ACTIVITIES ALONG THE AQUEDUCT LINE

(EDITOR'S NOTE: The following is a brief summary of some of the activities of the District as set forth in the monthly report of General Manager F. E. Weymouth, filed with the Board of Directors in August and covering work done in July.)

Legal Division

All necessary documents to secure payment for Interim Certificates Nos. 44 and 45, each in the principal sum of \$1,476,000, were prepared and the transactions closed. Resolutions for the issuance and sale of bonds in the amount of \$14,184,000 were prepared for adoption by the Board of Directors.

Miscellaneous Activities Division

During the month 1,337 applicants were cleared through the District's labor office, and of these 817 were made available for force account work, and 520 were made available for aqueduct contractors. Certificates of Registration were issued to 260 applicants, making a total of 20,395 certificates issued to July 31, 1936.

Field Engineering and Construction

Testing Laboratory—During the period 187,500 barrels of cement from the Colton, Riverside, Victorville, and Monolith mills were sampled and tested, and 143,472 barrels were shipped to the main aqueduct and the distribution system.

Safety Engineering—Survey of the first half of 1936 shows that lost-time accident frequency is 32.5 per cent lower than in 1935.

Operation of Utilities—Between June 16 and July 15, 5,850,885 kw. hr. of power was used; 15,220 long distance telephone calls were handled; and 6,217,800 cu. ft. of water was delivered.

Aqueduct Construction—See tables on Pages 4 and 5.

Civil Engineering Division

Specifications—Eight sets of specifications were issued during the month and included No. 160 for the Hayfield Pumping Plant and No. E-272 for camp buildings at Division 1 Headquarters.

Design—Specification drawings were completed for appurtenant works at the Hayfield Pumping Plant; complete drawings were prepared for the Coxcomb wasteway on the main aqueduct, and for the San Gabriel, Monrovia, and Eagle Rock canyon crossings on the

upper feeder of the distribution system. Studies were made of the Cajalco Outlet work, and analyses were made of sections for the Gene and Copper Basin dams.

Materials—Reinforcement steel orders placed during the month amounted to 194 tons of rail steel, and 1120 tons of intermediate grade steel, practically all of which was for tunnels on the distribution system.

Distribution Division

Office Engineering—Estimates were prepared for delivery lines to San Diego and other non-member cities in the south coastal plain, and for laterals to the San Jose and Whittier Hills.

Field Construction—See tables on Pages 4 and 5.

Electrical Engineering Division

Excavation for pumping plants was carried on at the Intake, Gene, and Eagle plants, but was suspended at Iron Mountain until cooler weather. Nineteen and one-half miles of towers were erected during the month on the 230-kv. transmission line, making a total of 44½ miles erected to July 31. Additional electric power service for Cabazon shaft was completed and placed in operation.

Personnel Division

Seventy-nine classified positions were filled during July, 73 being permanent positions, and 6 temporary. Thirty of the permanent positions were filled by transfers from other classified positions and two were filled by transfers from unclassified positions. The net turnover for all divisions for June was 17.86.

Purchasing Division

A total of 2181 purchase orders were issued during July, covering purchases amounting to \$260,327. Car forwardings for the month amounted to 677, of which 419 were cement.

Accounting and Costkeeping

Total costs to July 31, 1936, were \$88,978,892.90 for the various construction features, the estimated cost of which is \$155,509,754.

NEWS FROM FIELD AND OFFICE

Speaking of V. F. W. (see page 3) there is a large contingent of another branch of a clan with the same initials who are aqueduct employees. Veterans of Future Wars, and we DON'T mean the kind organized by the Princeton boys. In this case it refers to Reserve Officers of the U. S. Army, there being several hundred working on the big job. The Distribution Division reports that 1st Lieut. N. B. Smith, Field Artillery Reserve, U. S. A., has just returned from a tour of active duty at Fort Lewis, Washington. Out of uniform he is known as "Newt" Smith, the big theodolite man, who got a number of gray hairs every time one of the tunnels along the line was about to be holed through. He was responsible for checking the alignment on most of the tunnels from Valverde to the river.

* * *

A strictly unconfirmed report from Division 1 Headquarters states that hereafter the Personnel Division in Los Angeles will be expected to forward official A. A. U.—Horseshoe ratings (with handicap) on any new men to be sent to the river end of the aqueduct—for the approval of the local "grounds" committee—before the man is officially signed up by the District. The reason for this rather unusual request is that Chairman Allan Whitlock recently upset all the form charts in camp when he walked off with the local Barnyard Golf championship the first day he arrived.

* * *

General Clerk Robert "Bob" R. Lackey has left the wide open spaces in favor of the bright lights, having been transferred from the Boulder Transmission Line to Division 5 at Banning.

* * *

Those who may have called the Aqueduct Construction Company's camp on Schedule 1, "home," will be interested to know that the buildings have hitchhiked their way down to Division 3, where the same contractor now has excavation under way on the Pinto Siphon.

* * *

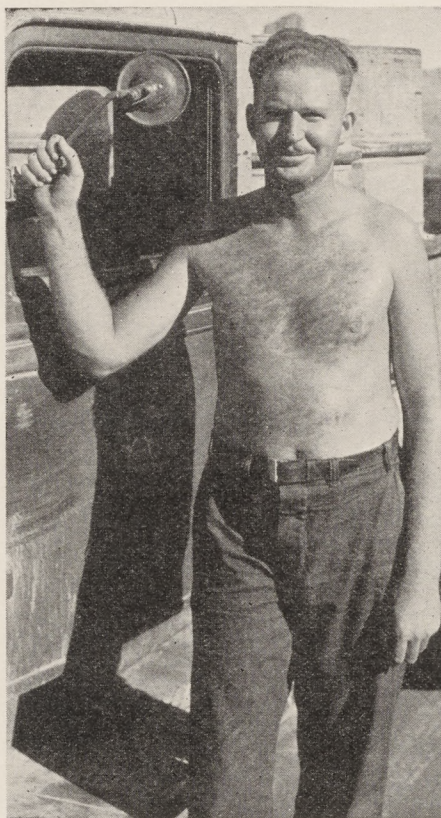
V. F. (V-V-V) Van Wye, one of the landmarks at Berdoo, has transferred his attentions to Banning, where he is now on the San Jacinto force account work.

Aqueduct Temperatures

August 1 to 15, 1936

	Max.	Min.
Div. 1	116°	76°
Div. 2	112°	80°
Div. 3	112°	80°
Div. 4	110°	75°
Divs. 5 and 6.....	105°	59°

Don DeWitt, Senior Inspector on Division 6, announces that the stork hovering over the DeWitt domicile in Riverside departed on July 10 after leaving a baby girl, weight 7.921875 pounds. He states that the weight given is only rough, and that as soon as he can find time between inspecting in the daytime and walking the floor at night, he'll forward the exact poundage. Thus far, the figures after the decimal point seem to have taken the place of a name for the young lady.



The gent back of the smile is B. M. Moseley, one of the pre-bond issue "aqueduckers." According to the "X" marks on his calendar he worked as a cook in various camps for 5 years, 1 month, and 28 days, having started in March, 1931. He is now part of the District's road maintenance crew.

Another Future Veteran, is 1st Lieut. L. W. Irwin, Corps of Engineers Reserve, now on duty at the Presidio of Monterey, California. Out at Cajalco, where "Wes" Irwin is office engineer, everybody except "Dick" Ward has been shining his shoes and practicing upon his "Yes'ir" in anticipation of Wes' return. In fact, the strain was so great on Fred Fauble, clerk on the job, that he got transferred to the Distribution's L. A. office rather than face the ordeal. Irwin will return, however, in the midst of "estimate" time and it is believed that this will soon whittle him down to normal.

* * *

Ralph Zook has been moved from Division 1 to Berdoo, and is now on Division 4 construction.

* * *

Gene Ellingford, the roaming telephone operator of Divisions 3, 4, 5 and 6, has been passing out cigars all along the line. To offset any ideas that he is "buying off" some of the wrong numbers he may have plugged, he wishes it officially stated that the reason for his generosity is the celebration of the arrival on July 14 of Miss Afton Marie Ellingford, gross weight 7 pounds.

* * *

L. A. office employees are planning a "wienie" roast on the afternoon and evening of September 12. All "aqueduckers" and their friends are cordially invited. Merrill Johnson of Purchasing will provide further information when the cost and place have been set.

* * *

A flash from Banning tells of the marriage on August 16 of Miss Elsie Hemmerling, member of a prominent local family, to George Panagos, who works for the District at Cabazon. The wedding was held at 2:30 P. M., Sunday, in the Banning Methodist Church.

* * *

Senior clerk, C. R. Kollenborn, has reversed Mr. Greeley's advice, and gone "east." Formerly chief clerk at Division 2, now occupies the same position at Division 1.

* * *

The District is entering an exhibit in the Grand Central Air and Industrial Exposition being held at the Grand Central Airport in Glendale from August 22 to 30 inclusive. The exposition will display articles from various Southern California industries, particularly the aircraft industry.

Wanted-Yacht Cap

It's "Skipper Bill" now instead of "Photo Bill," meaning of course W. N. Fox, of Banning and points east and west, the M. W. D. staff photographer. The well known sun helmet and even the broken-down cap (known in Hollywood as a beret) that occasionally peeps from his pocket, will soon be displaced by a 1937 model yacht cap with skipper's leaves embossed thereon. The reason for the expected change in top pieces is that Bill has acquired a yacht. Very shyly he declaims that a 32-foot yawl is just a boat and not a yacht; however, it is possible to eat on it, and sleep on it, and with a fair wind and his fingers crossed he expects to get to Catalina and back on it. The yacht's name by the way, is "Boojums"—which Bill claims is NOT baby talk, but has something to do with the South Seas.

Annual Picnic

The employees' annual picnic, held in Pasadena last year is to be sponsored by the Field this year. With a slogan of "Bigger and Better Picnics," a committee composed of N. I. Berg, Chairman, and "Dick" Stephens, Neal Smith, Wm. Fox, and V. F. Van Wye, all of the Banning office, are now fervently mulling over ideas for "Bigger and Better." Tentative plans call for the affair to be held during a shut-down period in the latter part of October in the vicinity of San Jacinto. Rumors are to the effect that the main effort will be a Bar-B-Que. Further statements will be broadcast in the NEWS as rapidly as the committee will release them.

Golf Match Aug. 30

As a result of the recent Olympiad, the sporting blood of golfing "aqueducters" has been aroused to the extent that 23 (who said Skidoo) have answered C. C. White's call to arms at the Baldwin Hills Course on August 30. For once it looks like the L. A. office might produce an athletic victory, because to date John Bartlett of Division 1 is the only entrant from the wide open spaces. John, if he follows the Field's usual form, will probably take the individual trophy being put up for "low net." However, the Office has a chance to take the prize for "low net foresome."

The handicap tournament's first flight will take off at 10:30 A. M., rain or shine. Police reserves have been arranged for to take care of the expected gallery. Hard hats are recommended for onlookers who are nervous about sliced balls.

Who's Who On the Aqueduct

(Another of a Series of Short Biographies of Aqueduct Personalities.)

L. M. RAMEY

Tunnel Superintendent, Walsh Construction Company

Born and educated in Springfield, Mo. Served apprenticeship in railroad shops as a machinist . . . Went from railroad-



L. M. Ramey

ing to highway construction with Grant-Smith Co. on Salmon River project in Idaho. Master mechanic, Southern California Edison Co., 1922 to 1925 on Big Creek project . . . With Twoby Brothers, contractors, on railroad construction for Northern Pacific at Orofino, Idaho, 1925-1926 . . . From 1926 to 1929 was with F. T. Huntington and Frazier Brace Co., on railroad tunnel construction in Columbia, South America . . . 1931-33 with Six Companies at Boulder Dam . . . Master mechanic for Wenzel and Henoch at San Jacinto in 1933 . . . With Walsh Construction Company since 1934, Superintendent of concreting in Copper Basin, Colorado River, and Whipple Mountain tunnels . . . He is married and has six children.

R. M. PEABODY

Asst. Chief Elec. Engineer, M. W. District

Born at Atchison, Kansas, 1881 . . . Graduated Harvard 1904 . . . From 1905 to 1909 was instructor in surveying, and draftsman on kiln and blast furnace design . . . 1909 to 1915 Assistant Engineer U.S.R.S., location of transmission line Roose-

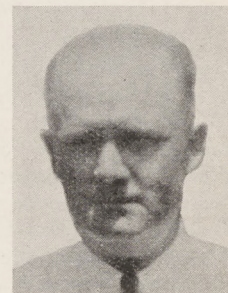


R. M. Peabody

velt Dam to Phoenix, inspector on Roosevelt Dam, designed various irrigation features, and assisted in design of Colorado River siphon, Yuma project . . . Assistant Superintendent El Paso Foundry and Machine Co., 1915-17 . . .

Captain Corps of Engineers, A. E. F., and Army of Occupation in Germany, '17-'19 . . . In charge of mechanical and hydraulic design Southern California Edison Co., 1920 to 1932 . . . Senior Engineer U. S. B. R., 1932-

1933, in charge of design Boulder Canyon power plant . . . Has been with Electrical Division of M. W. D. since 1933 . . . Is married.



Howard Jenkins

HOWARD JENKINS

Vice-President, American Concrete and Steel Pipe Company

Born in Iowa in 1892 . . . Has been in charge of manufacture and installation of all of American's products and pipe lines since 1922 . . . His company says of him . . . "He does all of the company estimating and is favored with a faculty of being able to observe in great detail all that he sees, and of registering it for future use . . . Has had a very wide range of experience in engineering and hydraulic work, and his knowledge of modern machinery, equipment, and construction methods rank with the best in the country." . . . He is married and has two lovely daughters, ages 19 and 14.

Ancient Survey of Colorado Recounted

Covering the life of a man who made exploratory surveys on the Colorado River in the vicinity of the District intake works more than two centuries ago, a book entitled "Rim of Christendom," by Herbert Eugene Bolton, has just been put on sale by the Macmillan publishing house.

The biography concerns the travels of Padre Eusebio Kino, an Italian Jesuit,

who came to the New World in 1683 and shortly thereafter established himself in Pima Land on the Sonora-Arizona-California frontier. He made numerous trips along the Colorado River, and kept a detailed diary in which he described many landmarks, Indian worship places and trails, the remains of which have since been found by M. W. D. survey parties.